

Aircraft Maintenance Personnel Skills CASA Adds New Part 43 Personnel

It is now apparent that CASA is ushering in a maintenance personnel skill future that could provide a divided skill base to support the maintenance sectors of civil aviation.

There is no evidence of CASA harmonising globally with maintenance personnel skills and licencing – factors that will probably affect future global maintenance agreements.

We now have part Europe, part USA and unique Australian:

- CASR Part 66 licencing system – applicable to CASR & CAR (EASA). +
- Part 43 proposed aircraft maintenance technicians/inspection authorisation system.
- Self-Administration Organisation approved maintenance personnel.

Adding the FAA Repairman system to the Australian European based licencing system is supported but at no time was the EASA Part 66 “L” maintenance certificate system consulted as an alternative approach. This is the norm for CASA consultation, they make up their own mind and then consult (tell) on its implementation. This is a reversal of CASA AME licencing policy to move away from EASA back to the FAA system.

The FAA Repairman and EASA “L” maintenance certificate systems cover the same sectors of maintenance and both are linked back into their respective licencing regulations; EASR Part 66 and FAR Part 65. This is not clear in CASA’s proposal. Will the FAA Repairman regulations be added to the CASR Part 66?

AMROBA supports the adoption of the FAR Repairman system because the utilisation under the FAR system will match the Australian GA/Sports sectors but it must include adopting FAR Part 65 Repairman requirements into the CASR Part 66 AME licencing system. CASA has opted to intermix these systems and AMROBA does not see this intermix causing any confusion or restriction on implementation if it includes Part 65. provisions

CASA’s Opportunity to Correct Past Errors Adopting EASR Part 66

Since the adoption of EASR Part 66/147, EASA has made many changes to EASA Part 66 to provide relief mainly for the GA sectors because it has been too onerous for the non-airline sectors and sport aviation. This would be an opportune time for CASA to add the B2L, B3 and Group ratings that EASA implemented to provide relief for the GA industry.

EASA Part 66 higher demands; We know that the deficiencies with the EASR Part 66 in basic training is currently under review by EASA and the higher requirements will be added to the EASR Part 66/147 system by 2023.

This admission by EASA of deficiencies in their training system won’t be endorsed by CASA who seem to delight on the impracticable, low mobility system that they have implemented.

The current system is already 3 revisions behind EASA amendments of EASR Part 66/147.

Two (2) agreements with New Zealand have been totally ignored by CASA.

- **Closer Economic Relations Trade Agreement (CER).** The CER came into force on 1 January 1983. The principal elements of the CER are: – free trade in goods – **free trade in services** – **free labour market** – **mutual recognition of goods and occupations.** [*Never achieved*]
- **The Trans-Tasman Mutual Recognition Arrangement (TTMRA)** Under the TTMRA, people registered to practice an occupation in one country are entitled to register to practice in the other. The TTMRA came into force on 1 May 1998. [*Never achieved*]
- About 160 countries have **National Qualifications Frameworks (NQFs)** and almost all of these have been developed in the last 10 years. Australia and New Zealand were pioneer countries and developed their NQFs in 1995 and 1991 respectively, making them among the first NQFs in the world. [*Dept of Education – Enhancing Mobility 2015*]

The Australian New Zealand Classification of Occupations:

- 323111 Aircraft Maintenance Engineer (Avionics)
- 323112 Aircraft Maintenance Engineer (Mechanical)
- 323113 Aircraft Maintenance Engineer (Structures)

Unlike NZ, try finding these occupations in Australia's AQF system?

Employers advertise for these occupations but our AQF system provides "Aeroskills Qualifications" [*Never been harmonised with NZ*]

- NZ National Certificate in Aeronautical Engineering (Related Technology) – Level-3
- NZ Diploma in Aeronautical Engineering (European Regulations) Level 5.
- Australian Certificate iv in Aeroskills (avionic/mechanical)
- Australian Diploma of Aeroskills (avionics/mechanical) (B1.1/B2 streams)

Following pages compare various countries AME licencing system. Done properly, FAR Part 43 can be adopted in Australia if their Repairman is adopted and Part 91 provisions.

If CASA adopted EASR Part 66 licencing properly, CASA should automatically accept EASA approved type training courses and remove unique requirements for CASA to approve these courses and add additional practical training that is a uniquely CASA requirement.

The same arrangements should be in place to attend FAA type training courses for experienced LAMEs. CASA can reduce the costs to holding and maintaining a current CASR Part 66 B1 & B2 requiring type ratings for employment purposes.

CASA created the major issues with implementing the "E" exclusion on LAME licences. The perceived exclusions have been a major stumbling block for AMOs. Added Costs.

For and on behalf of the members of AMROBA

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Job Description	EASA	FAA	NZ	Australia	
Line Maintenance engineer/technician	A1 – Aeroplanes Turbine	A&P Mechanic Repairman	Aeroplane Group 1 (Pressurised) Group 2 (unpressurised) Group 3 (wood or tubular) Group 4 (composite) Group 5 (<5700 Kg) Group 6 (type rating)	A1 – Aeroplanes Turbine	
	A2 – Aeroplanes Piston			A2 – Aeroplanes Piston	
	A3 – Helicopters Turbine			A3 – Helicopters Turbine	
	A4 – Helicopters Piston			A4 – Helicopters Piston	
Line and Base Maintenance engineer/technician	B1.1 – Aeroplanes Turbine		B1.1 – Aeroplanes Turbine	Rotorcraft Group 1 (piston engine) Group 2 Turbine engine Group 3 (type rating)	B1.1 – Aeroplanes Turbine
	B1.2 – Aeroplanes Piston				B1.2 – Aeroplanes Piston
	B1.3 – Helicopters Turbine				B1.3 – Helicopters Turbine
	B1.4 – Helicopters Piston				B1.4 – Helicopters Piston
Line + Base Maintenance engineer/technician	B2 – Avionics & Electrical	Group 1 Electrical (not Gp 6) Group 2 Electrical (>5700Kg) Group 1 Instrument Group 2 Instrument (>5700Kg) Group 1 Radio Group 2 + (navigation etc) Group 3 (radar txpr etc.) Group 4 (type rating)	B2 Avionic & Electrical		
		Inspection Authorisation		B1/B2 Inspection Authorisation Note 1	
		Repairman		AMTC 1 – CASA Defined Note 2	
Line + Base	B2L – B2 limited to system			Adopt EASR Note 3	
Mech & Avionics	B3 – Aeroplanes < 2000Kg			Adopt EASR Note 4	
Experimental Aircraft		Repairman certificate - experimental aircraft builder		AMTC 2 – Experimental Aircraft Builder. Note 5	

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Amateur Built & Experimental LSA		Repairman certificate (light-sport aircraft):		AMTC 3 - Inspection, Amateur-built and Experimental Light Sport Aircraft <i>Note 6</i>
Gliders composite	L1C: composite sailplanes	Repairman certificate (light-sport aircraft):		
Gliders	L1: sailplanes	Repairman certificate (light-sport aircraft):		
LSA maintenance		Repairman certificate (light-sport aircraft):		AMTC 4 – Light Sport aircraft-Maintenance. <i>Note 7</i>
Limited Cat Aircraft				AMTC 5 Maintainers of limited category aircraft. <i>Note 8</i>
Composite powered gliders & ELA1 aeroplanes	L2C: composite powered sailplanes and composite ELA1 aeroplanes	Repairman certificate (light-sport aircraft):		Alternative to the FAA Repairman system. Matches the CASR Part 66 adopted. Would introduce the EASA “L” licencing instead of the FAA Repairman (This option was never part of the consultation process by CASA)
Powered gliders & ELA1 aeroplanes	L2: powered sailplanes and ELA1 aeroplanes,	Repairman certificate (light-sport aircraft):		
Hot air balloons	L3H: hot-air balloons	Repairman certificate (light-sport aircraft):		
Gas Balloons	L3G: gas balloons	Repairman certificate (light-sport aircraft):		
Hot air airship	L4H: hot-air airships	Repairman certificate (light-sport aircraft):		
ELA2 gas airship	L4G: ELA2 gas airships	Repairman certificate (light-sport aircraft):		
Gas airship other than ELA2	L5: gas airships other than ELA2.	Repairman certificate (light-sport aircraft):		

Harmonisation – Not Unique Australian: Is there a need for all the “Aircraft Maintenance Technicians” when the FAA covers all these types of aircraft with “LSA Repairman Certificate” or EASA with their Part 66 “L” licences? **Stick with “Repairman”**

This “AMT” terminology clashes with ICAO’s Annex 1, Chapter 4 to describe a licenced Aircraft Maintenance Technician, Engineer and/or Mechanic. Is CASA trying to globally give the impressions the AMTC is a “licence”?

Annex 1 to the Convention: 4.2 Aircraft maintenance (technician/engineer/mechanic)

Note. — The terms in brackets are given as acceptable additions to the title of the licence. Each Contracting State is expected to use in its own regulations the one it prefers.

Global Harmonisation

If we are to enable the Australian civil aviation manufacturing and maintenance market to compete in the global aviation market there is a need to either align maintenance personnel terminology with ICAO, FAA or EASA. ICAO uses the term **Aircraft Maintenance Technician** in Annex 1 as an acceptable addition to the licence whereas Australia adopted the alternative term of Licensed Aircraft Maintenance Engineers. The USA uses both Technicians & Mechanics, where Australia’s use of “technician” would give the impression that an AMT in our regulations would be an ICAO AMT licence holder. The FAA uses the term “Repairman” for these classifications and EASA uses the Part 66 L categories to remove such confusion.

Considering that the main market is the USA, AMROBA fully recommends adopting the FAA terminology of “Repairman” instead of introducing the proposed Aircraft Maintenance Technician Certificate (AMTC) into Australian civil aviation regulations.

Notes in Chart:

Note 1. Inspection Authorisations

This is a resurrection of the Australian LAME’s ICAO privilege to certify as airworthy that was removed in the early 2000s when the airlines and the CAA agreed to introduce the “structures” stream and reduce the LAMEs to certify for maintenance and sign maintenance releases to return aircraft to service.

Not only does FAR Part 43 need to be fully adopted but FAR Part 91 airworthiness/maintenance provisions also need to be adopted.

AMROBA fully supports the adoption of this FAR requirement as long as it is added to the Part 66 B licences.

Reason: CAA agreed to remove the need for the B1, prior to the intro of Part 66, to understand design standards and structures. This removed from the VET training the capacity of the LAME to certify as “airworthy” that is a requirement of the FAA IA.

"FAR § 65.93 Inspection authorization: Renewal.

- (a) To be eligible for renewal of an inspection authorization for a 2-year period an applicant must present evidence during the month of March of each odd-numbered year, at the responsible Flight Standards office, that the applicant still meets the requirements of § 65.91(c) (1) through (4). In addition, during the time the applicant held the inspection authorization, the applicant must show completion of one of the activities in § 65.93(a) (1) through (5) below by March 31 of the first year of the 2-year inspection authorization period, and completion of one of the five activities during the second year of the 2-year period:
- (1) Performed at least one annual inspection for each 90 days that the applicant held the current authority; or
 - (2) Performed at least two [major repairs](#) or [major alterations](#) for each 90 days that the applicant held the current authority; or
 - (3) Performed or supervised and approved at least one progressive inspection in accordance with standards prescribed by the [Administrator](#); or
 - (4) Attended and successfully completed a refresher course, acceptable to the [Administrator](#), of not less than 8 hours of instruction; or
 - (5) Passed an oral test by an [FAA](#) inspector to determine that the applicant's knowledge of applicable regulations and standards is current.
- (b) The holder of an inspection authorization that has been in effect:
- (1) for less than 90 days before the expiration date need not comply with paragraphs (a)(1) through (5) of this section.
 - (2) for less than 90 days before March 31 of an even-numbered year need not comply with paragraphs (a)(1) through (5) of this section for the first year of the 2-year inspection authorization period.
- (c) An inspection authorization holder who does not complete one of the activities set forth in § 65.93(a) (1) through (5) of this section by March 31 of the first year of the 2-year inspection authorization period may not exercise inspection authorization privileges after March 31 of the first year. The inspection authorization holder may resume exercising inspection authorization privileges after passing an oral test from an [FAA](#) inspector to determine that the applicant's knowledge of the applicable regulations and standards is current. An inspection authorization holder who passes this oral test is deemed to have completed the requirements of § 65.93(a) (1) through (5) by March 31 of the first year.

FAR § 65.95 Inspection authorization: Privileges and limitations.

- (a) The holder of an inspection authorization may -
- (1) Inspect and approve for return to service any [aircraft](#) or related part or [appliance](#) (except an [aircraft](#) maintained in accordance with a continuous airworthiness program under [part 121](#) of this chapter) after a [major repair](#) or [major alteration](#) to it in accordance with part 43 of this chapter, if the work was done in accordance with technical data approved by the [Administrator](#); and
 - (2) Perform an annual, or perform or supervise a progressive inspection according to §§ [43.13](#) and [43.15](#) of this chapter.

(b) When he exercises the privileges of an inspection authorization the holder shall keep it available for inspection by the aircraft owner, the mechanic submitting the aircraft, repair, or alteration for approval (if any), and shall present it upon the request of the Administrator or an authorized representative of the National Transportation Safety Board, or of any Federal, State, or local law enforcement officer.

(c) If the holder of an inspection authorization changes his fixed base of operation, he may not exercise the privileges of the authorization until he has notified the responsible Flight Standards office or International Field Office for the area in which the new base is located, in writing, of the change.

The above needs to be added to CASR Part 66 to make the proposed system work.

Note 2. AMTC 1 – CASA defined.

Notwithstanding the terminology issue, as long as this replaces the CAR 33B Maintenance Authority and CAR 42ZC(6) CASA ability to approve a person or “class of person” to perform maintenance when employed by a maintenance organisation approved or not approved by CASA. The FAA still uses the “Repairman” for this issue. **AMROBA recommends adopting the FAR system fully and use the Repairman terminology for this purpose.** Why isn’t this classification used for Limited a/c?

Note 3. EASA B2L (light (systems) avionics).

EASA introduced this category to alleviate the problem with the B2 licence in the General Aviation sectors. They recognised that a system based licence is more appropriate to the aircraft types operated in the general aviation sectors. Australia’s general aviation sectors have been lobbying for this to no effect with a non-negotiable CASA Part 66 project management. This would return a sector applicable LAME that can continually upgrade, based on experience, to the full B2 licence. **AMROBA supports adoption of the B2L as soon as possible.**

Note 4. EASA B3 . Aeroplanes < 2000Kg

General aviation fully supported this licence and CASA agreed to implement during consultation but, CASA dropped this licence category, when introducing the Part 66 categories and sub-categories. No sensible reason has been provided by CASA so the general aviation sectors agree that CASA had been captured by some other sector. Not only does EASA have a B2L (LIGHT) avionics subcategory, they have Group ratings under the B1.2 that would also have benefited the general aviation sectors. **AMROBA supports adoption of the B3 as soon as possible**

Note 5 - 7 – AMTC 5-7 - Various LSA types

As per the previous Notes, addressing the use of the FAA Repairman Certificate, AMROBA supports that these can also be covered by the FAR Repairman Certificate. Even the Limited Class category can be added to the FAR requirements and added to CASA Part 66. **AMROBA supports the addition of the LSA Repairman Certificate.**

To be added to CASR Part 66:

65.107 Repairman certificate (light-sport aircraft): Eligibility, privileges, and limits.

(a) Use the following table to determine your eligibility for a repairman certificate (light-sport aircraft) and appropriate rating:

To be eligible for	You must
(1) A repairman certificate (light-sport aircraft)	<ul style="list-style-type: none"> (i) Be at least 18 years old, (ii) Be able to read, speak, write, and understand English. If for medical reasons you cannot meet one of these requirements, the FAA may place limits on your repairman certificate necessary to safely perform the actions authorized by the certificate and rating, (iii) Demonstrate the requisite skill to determine whether a light-sport aircraft is in a condition for safe operation, and (iv) Be a citizen of the United States, or a citizen of a foreign country who has been lawfully admitted for permanent residence in the United States.
(2) A repairman certificate (light-sport aircraft) with an inspection rating	<ul style="list-style-type: none"> (i) Meet the requirements of paragraph (a)(1) of this section, and (ii) <u>Complete a 16-hour training course acceptable to the FAA on inspecting the particular class of experimental light-sport aircraft for which you intend to exercise the privileges of this rating.</u>
(3) A repairman certificate (light-sport aircraft) with a maintenance rating	<ul style="list-style-type: none"> (i) Meet the requirements of paragraph (a)(1) of this section, and

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To be eligible for	You must
	<p>(ii) Complete a training course acceptable to the FAA on maintaining the particular class of light-sport aircraft for which you intend to exercise the privileges of this rating. The training course must, at a minimum, provide the following number of hours of instruction:</p> <p>(A) <u>For airplane class privileges - 120-hours,</u></p> <p>(B) <u>For weight-shift control aircraft class privileges - 104 hours,</u></p> <p>(C) <u>For powered parachute class privileges - 104 hours,</u></p> <p>(D) <u>For lighter than air class privileges - 80 hours,</u></p> <p>(E) <u>For glider class privileges - 80 hours.</u></p> <p>(F) For Limited Class aircraft privileges – 120 hours?</p>
<p>(b) The holder of a repairman certificate (light-sport aircraft) with an inspection rating may perform the annual condition inspection on a light-sport aircraft:</p> <p>(1) That is owned by the holder;</p> <p>(2) That has been issued an experimental certificate for operating a light-sport aircraft under § 21.191(i) of this chapter; and</p> <p>(3) That is in the same class of light-sport-aircraft for which the holder has completed the training specified in paragraph (a)(2)(ii) of this section.</p> <p>(c) The holder of a repairman certificate (light-sport aircraft) with a maintenance rating may -</p> <p>(1) Approve and return to service an aircraft that has been issued a special airworthiness certificate in the light-sport category under § 21.190 of this chapter, or any part thereof, after performing or inspecting maintenance (to include the</p>	

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annual condition inspection and the 100-hour inspection required by [§ 91.327 of this chapter](#)), preventive maintenance, or an alteration (excluding a major repair or a major alteration on a product produced under an FAA approval);

(2) Perform the annual condition inspection on a light-sport aircraft that has been issued an experimental certificate for operating a light-sport aircraft under [§ 21.191\(i\) of this chapter](#); and

(3) Only perform maintenance, preventive maintenance, and an alteration on a light-sport aircraft that is in the same class of light-sport aircraft for which the holder has completed the training specified in [paragraph \(a\)\(3\)\(ii\)](#) of this section. Before performing a major repair, the holder must complete additional training acceptable to the FAA and appropriate to the repair performed.

(d) The holder of a repairman certificate (light-sport aircraft) with a maintenance rating may not approve for return to service any aircraft or part thereof unless that person has previously performed the work concerned satisfactorily. If that person has not previously performed that work, the person may show the ability to do the work by performing it to the satisfaction of the FAA, or by performing it under the direct supervision of a certificated and appropriately rated mechanic, or a certificated repairman, who has had previous experience in the specific operation concerned. The repairman may not exercise the privileges of the certificate unless the repairman understands the current instructions of the manufacturer and the maintenance manuals for the specific operation concerned.